

USSN: 10/689,942
Atty. Docket No.: 2002B159/2
Amendment dated June 29, 2006
Reply to Office Action of April 3, 2006

6. (Original) The composition according to claim 1 wherein the hydrocarbon resin is substantially hydrogenated before grafting.
7. (Original) The composition according to claim 1 wherein the oligomers are oligomers comprising cyclopentadiene, substituted cyclopentadiene, and C₉ monomers.
8. (Original) The composition according to claim 1 wherein the oligomers are substantially hydrogenated before grafting.
9. (Original) The composition according to claim 1 wherein the grafted material has an aromatics content less than 15%.
10. (Original) The composition according to claim 1 wherein the processing oil is selected from paraffinic oils, aromatic oils, naphthenic oils, and polybutene processing oils.
11. (Original) The composition according to claim 1 comprising 2-20 phr processing oil.
12. (Original) The composition according to claim 1 comprising 5-15 phr processing oil.
13. (Original) The composition according to claim 1 wherein the graft monomer is maleic anhydride.
14. (Original) The composition according to claim 1 further comprising a filler selected from carbon black, modified carbon black, silicates, exfoliated clay, partially exfoliated clay, modified exfoliated clay, modified partially exfoliated clay, and mixtures thereof.
15. (Original) The composition according to claim 1 further comprising a secondary rubber selected from natural rubbers, polyisoprene rubber, styrene-butadiene rubber (SBR), polybutadiene rubber, isoprene-butadiene rubber (IBR), styrene-isoprene-butadiene

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rubber (SIBR), ethylene-propylene rubber, ethylene-propylene-diene rubber (EPDM), polysulfide, nitrile rubber, propylene oxide polymers, poly(isobutylene-*co-p*-methylstyrene), halogenated poly(isobutylene-*co-p*-methylstyrene), poly(isobutylene-*co-cyclopentadiene*), halogenated poly(isobutylene-*co-cyclopentadiene*), poly(isobutylene-*co-isoprene-co-p*-methylstyrene), halogenated poly(isobutylene-*co-isoprene-co-p*-methylstyrene), poly(isobutylene-*co-isoprene-co-styrene*), halogenated poly(isobutylene-*co-isoprene-co-styrene*), poly(isobutylene-*co-isoprene-co- α* -methylstyrene) halogenated poly(isobutylene-*co-isoprene-co- α* -methylstyrene) and mixtures thereof.

16. (Original) The composition according to claim 1 wherein the elastomer comprises units selected from isobutylene, isobutene, 2-methyl-1-butene, 3-methyl-1-butene, 2-methyl-2-butene, 1-butene, 2-butene, methyl vinyl ether, indene, vinyltrimethylsilane, hexene, 4-methyl-1-pentene, isoprene, butadiene, 2,3-dimethyl-1,3-butadiene, myrcene, 6,6-dimethyl-fulvene, hexadiene, cyclopentadiene, piperylene, styrene, chlorostyrene, methoxystyrene, indene and indene derivatives, α -methylstyrene, *o*-methylstyrene, *m*-methylstyrene, and *p*-methylstyrene, and *p*-tert-butylstyrene.
17. (Original) The composition according to claim 1 wherein the elastomer is a terpolymer.
18. (Original) The composition according to claim 1 wherein the elastomer is halogenated.
19. (Original) The composition according to claim 1 further comprising a curing agent selected from sulfur, sulfur-based compounds, metal oxides, metal oxide complexes, fatty acids, peroxides, diamines, and mixtures thereof.
20. (Original) The composition according to claim 1 or 19 having a green tack above 0.5 N/mm.

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21. (Original) A cured composition according to claim 19 having a brittleness temperature below -36°C .
22. (Original) A cured composition according to claim 19 having an air permeability less than $4.0 \times 10^{-8} \text{ cm}^3 \cdot \text{cm}/\text{cm}^2 \cdot \text{sec} \cdot \text{atm}$.
23. (Original) An article selected from tire curing bladders, innerliners, tire innertubes, and air sleeves comprising a composition according to claim 1 or 19.
24. (Currently Amended) An article selected from tire curing bladders, innerliners, tire innertubes, and air sleeves, wherein the article comprises ~~comprising~~ (1) a grafted hydrocarbon resin, (2) grafted oligomers having units selected from the group of cyclopentadiene, substituted cyclopentadiene, C_5 monomers, and/or C_9 monomers, and/or (3) combinations thereof.
25. (Currently Amended) A process for manufacturing an air barrier comprising mixing (a) an elastomer comprising C_4 to C_7 isoolefin derived units; (b) a processing oil; (c) a grafted material obtainable by the reaction of an unsaturated acid or anhydride and (i) a hydrocarbon resin, (ii) grafted oligomers having units selected from the group of cyclopentadiene, substituted cyclopentadiene, C_4 - C_6 conjugated diolefins, and/or C_8 - C_{10} aromatic olefins, and (iii) combinations of (i) and (ii).
26. (Original) The process according to claim 25 further comprising curing the mixed composition.